

ABSTRACT

An RF power oscillator for contactless card antennas shapes a carrier signal at the operating frequency utilizing a delay circuit having a number of taps for delaying the carrier signal by different lengths of time. The delayed signals are input into a buffer and output through impedance elements to a node coupled to the antenna. The resulting waveform for a square wave input signal, and equal-length delay taps, is a trapezoidal wave output. Any input wave form can be shaped in a variety of ways depending upon the combinations of delay taps used. Since the buffer drivers for each delayed wave switch state at slightly different times, the amplitude and bandwidth of emitted electromagnetic interference (EMI) is reduced for the transmission circuit.